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ABSTRACT

Human suffering in India will continue as long as population growth is not checked. A change in this trend is dependent on the citizens of the country. Population education is an important priority in India. Included in this document are four essays covering various socio-psychological aspects of population issues and designed to be of use to educators in the field. The essays are: (1) "Adolescence" (G. N. P. Shrivastava); (2) "Education in Family Living" (S. N. Tripathi); (3) "Psychology of Population Issues" (S. N. Tripathi); (4) "Some Psychological Consequences of Crowding" (U. Jain and G. Misra). (CW)

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SOCIO-PSYCHOLOGICAL ASPECTS OF POPULATION ISSUES

Instructional Material in Population Education for Teachers

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SOCIO-PSYCHOLOGICAL ASPECTS OF POPULATION ISSUES

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Instructional Material in Population Education for Teachers

POPULATION EDUCATION CELL

REGIONAL COLLEGE OF EDUCATION

NATIONAL COUNCIL OF EDUCATIONAL RESEARCH & TRAINING
SHYAMLA HILLS, BHOPAL

3

FIRST EDITION 1988

POPULATION EDUCATION CELL, 1988-89

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Foreword

Human suffering in the Indian context would continue as long as our growth in population is not checked. This would then depend on our citizenry for making a decision in favour of improving the quality of our life. Population issues are crucial for this kind of affective thrust. Dr. (Mrs) S. Masih co-ordinated the present project whose report is now in your hands. Since the topics of this problem were suggested in the workshops attended by teacher educators, I am sure, they would find this material useful for their classwork.

I would like to record my sincere thanks to the authors of the articles and the then incharge of the population cell Dr. (Mrs) S. Masih and Dr. J. P. Singh for completing the formalities of seeing this material through press.

R. P. Singh
Principal
Regional College of Education
BHOPAL

26.12.1988

Preface

During the workshops held at Ahmedabad, Bhopal and Khiroda in 1983-84 teacher educators analysed the B. Ed. syllabi of their universities and suggested population education concepts which could be included in different papers. In the Psychological Foundation paper, concepts suggested for inclusion were over-crowding adolescence and psychology of population issues. Based on this need, the present booklet was prepared. Hence, it is hoped that all those interested in population education programmes would benefit from this material. This publication is the result of a team-work, co-ordinated by the then incharge of the population cell, Dr. (Mrs) S. Masih. I also sincerely acknowledge the untiring pains taken by Dr. J. P. Singh in bringing this material in the present form.

Finally, I am thankful to Prof. R. P. Singh, Principal, RCE, Bhopal for his academic support in printing the booklet.

26.12.1988

A. C. Pachaury
Incharge
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ADOLESCENCE

—G. N. P. Srivastava

The Developmental Trends and Problems :

Adolescence has received attention as a special developmental epoch because of importnnt changes that our during this period - changes such as the physical transformations of puberty, the reorientation of social interests away from parents and towards the peer group, the increased pressures for heterosexual experimentation. Psychological studies of adolescence focus attention on the contribution of these changes to the individual's development between the two great developmental epochs of childhood and adulthood. Hence, adolescence can be viewed as a period of psychological transition from one status to another.

Popularly adolescence is known as the teenage, phenomenon represented by thirteen to nineteen years. The first turmoil that the child undergoes is between the age of three to six years when the ego and the super-ego develop After six years and up to the age of twelve, there is a period of tranquility which has been termed as 'latency' period by Freud. In the first half of adolescence, from thirteen to fifteen years, with the emergence of puberty, this tranquility of the latency period is disturbed The youngster now faces the powerful drive of the beginning of the adult sexuality which upsets the balance that he had acquired during latency period.

Adolescence is the most impressionable period of one's life. It is the period when he begins to feel the first dawn of power and wants to be emancipated from the control of parents. It is a period of day-dreams, of adventures, of intense affection and loyalty of the peer group and the stirring of heart for the opposite sex. Hopkins (1983) has made two observations about the onset of puberty First, there is a clearcut difference between the average age of puberty for boys and girls. In case of girls the onset of puberty is marked by first menstruation or menarche. For boys, it is difficult to pin-point an equivalent development, although growth of testes and penis could be taken as indices of attainment of puberty. The growth purt in girls, on the average, is at age 12, and for boys it is two years later at the age of 14 (Tanner, 1972). Adolescents are self-conscious by nature and are often absorbed in intense introspection. The harsh change in voice among boys and development of breasts among girls and other bodily changes tend to accentuate their feeling of self-consciousness.

Second, a trend has been noticed during the last hundred years for sexual maturation to occur at earlier ages. This would mean that the years a of childhood are now beoming fewer as puberty is being reached earlier.

Adolescence is the stage of the life cycle when one confronts the psychological issue of identity - defining the nature of one's self and one's role in the world at large. Adolescents seek their identity in a cultural context Many adolescents experience a sense of alienation from the perceived norms of adult society. A second theme of adolescence is the establishment of autonomy - in a psychological sense - from parents. Most adolescents make important decisions about their life goals.

Physical Development : Puberty brings a number of changes. Contours of the body become more adult like. Interests change and sexual desire (lust) is a major new interest. Expectations for more mature behaviour emerge. Erik Erikson (1968) worte, "This developmental stage is characterized by a diversity of changes in physical growth, genital maturation, and social awareness....."

Here is one of history's first descriptions of puberty, from Aristotle's **Historia Animatium**, "For the most part males begin to produce sperm when 14 years have heen completed At the same time pubic hair begins to appear. At the same time in females a swelling of the breasts begins and menses begins to flow....In majority the menses are first noticee after the breasts have grown to the height of two fingers. (Amundsen & Dier, 1969).

The physical transformations of puberty are under complex harmonal control directed by the brain. Hypothalamic stimulation of the pituitary initiates release of gonadotrophic (GTH) and adrenocortico trophic (ACTH) hormones, which in turn stimulate the adrenal cortex and the gonads to increase their production of harmones that regulate the physical changes of puberty. Girls mature earlier than boys by an average of 2 years. Boys and girls are out of phase with each other in physical development and in social interests in the first phase of puberty. The delayed growth in boys sometimes takes the form of feelings of inferiority, with boys acting in an aggressive manner to compensate for their lack of physical stature. Girls may suffer from less mature emotional needs, adjustment problems in comparing themselves to

their more physically mature age-mates. This can be a difficult time for adolescents as they learn to accept the physical pluses and minuses of their own bodies.

In dealing with young people, educators must be aware that no two youths will necessarily be at the same stage of growth at the same time. Physical education programmes must take these differeces into consideration so that those who are not maturing as rapidly as other do not feel that they are inferior but that they are competing with themselves to better their own bodies in stregth and coordination. In the classroom, teachers must be aware that students who are in the process of reaching puberty are in a state of physical upheaval an this affects their behaviour, attitudes, mood swings and ability to concentrate.

Psycho - Sexual Development : The sexual instincts are at their peak during adolescence according to Freud. He has classified the development into two broad phases Pregenital Sexuality and Genital Sexuality.

The earliest expression of pregenital sexuality is through the region of the mouth which has been described by Freud as an "erogenous zone." Mouth is the primary source for the expression of the sexual instinct during the first year of life. Gratification of this instinct is attained through the sucking of the mother's breast, child's own thumb, or other objects that can be sucked. As the child crosses the first year of life, the erogenous zone shifts to anus. Between the age of one to three the anal region becomes the next erogenous zone. The child derives sexual pleasure from this region of the body especially during the process of elimination. There is no difference between boys and girls in oral and anal sexuality. Thus up to the age of three the two sexes follow the same course of psycho-sexual development. After the age of three, with the beginning of the Oedipal phase, the two sexes embark upon two different courses of development.

Freud's Psychosexual Stages

Stage	Age	Major Characteristics
Oral	Birth—1	Mouth region primary erogenous zone, sucking for gratification, relative primacy of id.

Anal	1—3	Anus primary erogenous zone, elimination as form of gratification, feces as gifts, ego as aid in adaptation to external reality.
Oedipal	3—5	Boys : Penis as source of sexual excitation, incestuous fantasies toward mother and rivalry with father, culminating in intense castration anxiety and sexual repression, as well as super ego development.
		Girls : Clitoris as source of sexual excitation, anatomical enlightenment leads to castration complex (feeling that she has been castrated and is inferior to boys), culminating in repression of sexual instincts.
Latency	5—Puberty	Period of sexual repression during which the ego becomes significantly strengthened.
Adult Genital	Adolescence 12—19	Development of sex-role, identity and nonincestuous heterosexual object choice.

Genital sexuality begins at the age of three. The primary source of sexual excitation now becomes the genital region. This stage also marks the beginning of the Oedipal period.

The period from three to five is known as the oedipal stage. The primary source of exual excitation now becomes the genital region. True genital sexuality will begin at the age of twelve. Freud has used the term Phallic Stage to designate the sexuality between three to five. This term helps in differentiating the sexual development between three to five from adult sexuality. The phallic stage is accompanied by a strong feeling of sexual attraction for parent of the opposite sex.

During the Oedipal stage, boys and girls follow a separate course of development. Boys develop attraction towards the mother and consider father as a rival. This is known as the Oedipus complex. Girls develop a similar attraction for the father

and treat the mother as a rival. This has been called Electra complex. Both these complexes give rise to anxiety. Finally, in the course of normal development, the Oedipus or Electra complex is resolved. Infantile sexuality is repressed and the child, instead of experiencing a feeling of rivalry towards the same sex parent, now identifies with him or her, internalizing the value system of the parent. This marks the beginning of the Latency stage around the age of five.

In adolescence, the pregenital erogenous zones come under the hegemony of the genital zone as the primary Source of sexual excitation. For a normal adult, the primary source of sexual gritification is through the genitals in heterosexual intercourse.

A second major change during adolescence is the change from autoerotic and masturbatory sexual expression during infancy to external object choice. The adolescent sexuality undergoes severat phases before the final phase of heterosexual object choice is reached. Early adolescence is characterized by infatuation with one's own self and has been given the name 'narcissism'. This may be followed by a phase of homosexulity. Finally heterosexuality emerges.

A thild change is the establishment of psychological autonomy and breaking away from parental authority. This is known as adolescent rebellion and should be treated as a normal phenomenon. The psychological autonomy that is achieved from the parents by one's own independent idias, has been referred to is *'INDIVIDUATION'* (Blos 1962)

There is an erotic element in narcissistic friendships or friendships with persons who are like the self. During the early years of puberty this may find expression in such behaviours as mutual masturbation. In late adolescence, love towards the opposite sex clearly emerges. Even then the social norms and the restraints originating form the super-ego may prevent the adolescent from experiencing heterosexual intercourse. Still the genital urges may be gratified through fantasy.

There is a prevailing notion in the society that masturbation leads to the weakening of the nervous system and mental disorders. This has no scientific basis. Unnecessary fears and anxieties regarding mastnibatinan are implanted by adults in the minds of adolescents. It is true that channels should be provided for the sublimation of the sex instinct. Outdoor games, sports, curricular activities, scouting and girl-guiding, music, dancing, and artistic activities provide a socialy approved channel for the expression of the sex in its sublimated form. But it should be remembered that the instinct cannot be entirly sublimated. It will continue to exist in its primitive form as well The best thing that the adults, who are in charge of the adolescents, can do is to help them in

understanding sex as a normal, healthy phenomenon, which has to be kept under certain checks and restrains in order to maintain the social order and the family system Balance between freedom and control over adolescents helps them in natural development and self-discipline. Sex enlightenment provided through the medium of regular subjects of curriculum helps them to understand the nature of sex phenomena. Adolescents' curiosity about sex maybe satisfied by providing sex education in the curriculum.

Social Development and Parental Authority

Relationship between adolescents and their parents involves reciprocal influence, which is apparent with respect to parental discipline Authoritarian discipline including physical punishment is associated with dependency and rebelliousness in adolescents. Highly permissive climate may also lead to dependen. With physical maturation at puberty, adolescents become more assertive in social interchanges with parents.

Research reveals few dramatic differences between attitudes and values of adolescents and their parents, contrary to the implications of the term 'generation gap'. Adolescents attribute more positive characteristics to adults than they to their peers. In the social orientation of adolescents the peers group influence is greater than that of parents. During this time, adolescent attitudes toward parents become less favourable, and their willingness to endorse peer misconduct increases.

Evidence from research suggests that adolescents show increasing autonomy with age, they become somewhat less likely to conform to either parents or to peers as they grow older. Conformity to antisocial behaviour peaks in middle adolescence at around age 15, but in general, they are less likely to conform to antisocial behaviour than to social or neutral behaviour.

According to Sullivan's theory, the major interpersonal need systems of security, intimacy, and lust come into conflict in adolescence. Separation from parents has positive psychological effects for both adolescints and their parents. A greater degree of separation show more independence from, and affection toward, their parents.

Emotional Development :

Adolescence is a period of great excitability of emotions. Love is the dominant feeling of adolescence. The early interests of adolescents are personal in nature, The social and emotional changes that appear at this stage are reflected in the development of interests in others and especially in changed attitude and feeling toward members

of the opposite sex. The play life of adolescents involves more of the team spirit and group action that was the case during the preadolescent stage. Adolescent boys continul to show an interest in adventure, but adventures are less fantastic and are more closely (connected) with present day living conditions and problems.

When adolescents interests are not expressed in reality they usually appear in day dreams, wishes and imagination. It is essential that parents and teachers have a knowledge of adolescent interests, so that they may aid him better to understand himself and direct or guide him toward a more complete fulfilment of his aspirations and possibilities. It is the prime duty of the educator that adolescents, feeling of love does not take a mischievious turn. Adolescent love is to be utilized in the service of society. It should not be allowed to waste itself away in mere Vituperations of the heart.

Juvenile Delinquency :

There is an important distinction between delinquent behaviour and official delinquency. 'Delinquent behaviour' refers to any act of a juvenile that would be a chargeable offence according to juvenile Justiceial Laws. 'Official delinquency' refers only to these acts involving adolescents actually apprehended for delinquent behaviour. This disparity between these two categories, acts performed but not resulting in legal action, is referred to as hidden delinquency'.

The term 'delinquency' is derived from a Latin word meaning "to leave undone". It is defined by Webster's New World Dictionary as "failure or neglect to do what duty or law requires". The term is usually preceded by the word "Juvenile", so as to limit its application to adolescents (in exceptional cases, to children). In practice, delinquency usually refers to acts committed by juveniles in willful violation of rules or statutes, juvenile behaviour includes instances of undetected or hidden delinquency, as well as the cases of official juvenile delinquency.

Factors Associated with Delinquency

Broken Homes :

There is a direct causal connection between broken homes and delinquency. Adolescents from broken homes or disorganised families have negative attitude towards their parents. When there are strained relationships between parents and adolescents, the adolescents are more likely to become official delinquents and juvenile delinquency is likely to cause some deterioration in family relationship.

Social Class :

Many people assume that lower-class adolescents are more likely to engage in delinquent behaviour than their middle and upper class counterparts. But Miller's study (1958) found no major difference bfitween lower class gang and non-gang, lower class and middle class boys in the evaluation of the middle class norms. But the study by Erickson and Empey (1965) showed that there was a slight tendency for the upper class boys to commit fewer delinquent acts than the boys in the other two groups

Arrest rates for juvenile delinquency do show a strong tendency to be higher among lower class adolescents. This may be due to the possibility of bias in arrest rates as a function of class and race.

Intelligence :

Studies on the relationship between delinquent behaviour on the one hand, and social class or race, on the other, indicate that overall delinquent behaviour varies to some extent as a function of racial and social-class groups. Intelligence also seems to exert an influence on delinquent behaviour The adolescents with lower IQ are more likely to show delinquent behaviour. Low fducational attainment is also associated with juvenile delinquency. High School drop-outs have been found involved in serious delinquency.

Delinquency Among Girls :

While the young male delinquent shows a wide variety of behaviour, the girl, in contrast, posseses a quite limited delinquent repertoire. By and large, her legally defined offences consist of sexual misbehaviour and vagrancy, running away, and stealing (Friedman, 1969).

Adolescent girls commit a fullrange of delinquent acts, not specializing in any given category. They are for less likely than males, however, to engage in theft of large amounts, gang fist fights, gambling or promiscuous sexual behaviour (Hindelang, 1971).

Each of the factors that have been cited above - family relationships, social class, age, education - should apply equally to males and to females. Broken homes are equally harmful to boys and girls. It is certainly possible that sex-role consolidation in adolescence is a process heavily influenced by environmental contexts, such as family situation and socio - economic status.

Psychological Problems of Adolescents

Adolescent Schizophrenia :

Schizophrenia is only one diagnostic category for psychiatric problems in adolescence Scizophrenia is a serious psychological disorder that is characterized by an inability to function in the day-to day world. It includes marked impairment in intellectual functioning, bizarre thought processes, such as delusions and hallucinations and little or no insight into the disorder. Schizophrenia accounts for approximately 8-10 percent of cases of psychological problems in adolescence. Adolescent schizophrenics have a poorer prognosis The onset of schizophrenia is harder to detect among adolescents than adults. Behavioural signs of schizophrenia may appear in childhood or early adolescence, prior to onset of the disorder Approximately one third to one-half of preschizophrenic adolescents are identifiable as "deviant" during childhood. The likelihood of making a good adjustment is poorer for adolescent schizophrenics than it is for adolescents with other psychiatric problems. Prognosis is poorer for younger than older adolescents.

Depression and Suicide :

Depression is relatively rare among adolescents, although it may be a common psychological experience. Behavioural manifestations of depression include drug abuse, alcohol abuse, promiscuity, and suicide attempts. Suicidal behaviour among adolescents is accompanied by serious depression in about 80 percent of cases. Many psychologists believe that alienation may be a mediating factor in adolescent suicidal behaviour. Several studies have suggested that family problems are also important contributing factors.

Adolescents with suicidal trends some evidence of disordered thinking. They appear to be more rapid thinkers, refusing to consider alternative solutions. They appear to view the world dichotomously, admitting no compromises between happiness and despair

Use of Drug and Alcohol :

A larger percentage of adolescents now use alcohol and drugs than in previous years. A substantial proportion of high-school and higher secondary school students are problem drinkers, especially males. Drinking among adolescents often is associated with family problem, frustration in love, parental separation and parental alcoholism.

Achieving Hetero Sexuality :

It is clear that from self love of narcisism to homosexuality is the development of love in adolescent. From homosexuality to heterosexuality is the last transition. But this heterosexuality creates many problems among adolescens. It can be easy and natural, if the erivironment contains a large number of potential mates. But adolescents may be too shy to make the necessary social contacts. They may have actual or fancied deformity which allows them to pretend that they are unattractive. Again, they may have experienced some great sexual shock and become too inhibited ever to react normally.

Girls with strong feelings of rivalry with boys may be unable ever to fall in love with them. Boys with strong fixations on their mothers may be unable to fall in love with any other female. Other boys may be too suspicious of girls to love any of them. Thus, boys and girls may regress to homosexual love.

The Effect of Sexual Ignorance :

In can be seen in the wide spread of illegitimacy, rape, and veneral disease among a dolescents. Ignorance, distortions and fear-ridden half-knowledge are prominent among the children involved in sex crimes. More important are the emotional bruises that may attend the unprepared adolescents, first sexual experience.

Acolescent Masturbation :

It is quite common, during this period, among both boys and girls. About 70 to 90 percent of boys and 30 to 70 percent of females admit having masturbated during adolescence. Organically, there is no difference between masturbation and sexual intercourse. Masturbation, therefore, has no unique physical effects on the mind or body. The dolescent masturbator will not lose his virility, become a pervert, or lose his intellect because of this practice. Excess of everything is bad. The sexenergy should be sublimated by creative works, sports, games, artistic activities and other co-curricular activities, religious pursuits, social work, etc., as far as possible.

Becoming independent of the family, attaining emotional and social maturity are other problems of adolescence which should be attained by social interaction. Proper guidance be provided by the parents and teachers. Keeping in view so many emotional, Psychosexual tensions, conflicts, guilt and anxiety adolescence is truly called "a period of storm and stress".

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EDUCATION IN FAMILY LIVING

— *S. N. Tripathi*

The title of this paper has been deliberately kept as 'Education in Family Living' instead of 'Sex Education'. The moment one talks of introducing sex education in our schools and colleges people feel very much concerned. They think that any talk related to sex is strictly meant for adults, and imparting sex education will unnecessarily stimulate sexual curiosity among adolescents and may lead to sexual misbehaviour. They somehow equate sex education with matters that have been discussed by Vatsyayan in his famous book *KAMASUTRA*. On the other hand, many parents would very much prefer for their children books that recommend observance of strict celibacy, abstinence even in thought on matters related to sex, and books and articles which dwell on the harmful effects of masturbation and predict loss of physical and mental powers due to selfindulgence. They do not realize that such literature gives rise to feelings of guilt, anxiety and needless worries in the minds of adolescents.

Children cannot be kept ignorant of sex Many parents feel very much embarrassed when their small child asks, "Mummy please tell me how babies are born"? If the parent becomes ruffled and shows displeasure, the child will think that he committed a misdemeanour by asking such a question. But the child will get his answer and it may come from an elder playmate / or some other person who may give a great deal of misinformation along with some essential facts.

As the child enters puberty he or she becomes preoccupied with the changes taking place in his body. While the teachers and parents maintain strict silence over the topic of sex, their sons and daughters share obscene books and see obscene photographs in secrecy with their age-mates. It is not uncommon for college boys to visit brothels. Teenage pregnancy among unwed girls, though less frequent in our country, is still a problem towards which we cannot close our eyes. I was told that in a government hospital, in a month, at least one such girl comes to the hospital for the termination of pregnancy. It can be assumed that several others may be going to quacks. As the society becomes more and more permissive teenage pregnancies among unmarried girls is likely to increase. In the U. S. A., Zelnick and Kanter (1980) conducted two nationwide surveys. They found that by 17, one girl in ten became pregnant at least once. This is an alarming figure.

Anti-social elements are present in all societies. In the cities the parents cannot exercise the kind of supervision that is possible in villages and small towns. Schools may be situated at a considerable distance from the home. The parents will not be in

a position to know if their ward, instead of going to the school, spends his time elsewhere, or after the school is over, instead of coming straight to the home loiters in the streets and spends time in the company of persons who may not be considered very desirable. Ignorance of children about matters related to sex is the most potent factor which may be responsible for introducing them to sexual malpractices by persons who are ready to exploit the ignorance of their victims. There are adults who suffer from a disorder known as paedophilia They some how are afraid of other adults for seeking sexual satisfaction and turn to children. Girls who are unhappy in the parental home, either due to the presence of a step-mother or for some other reason, are more willing to seek their happiness elsewhere. They may fall an easy prey to the persuations of an adult and may elope with him. If they had some inkling as to what was in store for them after elopement, they would not have taken a hasty decison.

It is a matter of pride for us that with the dawn of independence, women in India did not have to fight for obtaining the right to exercise their franchise. In fact, the Indian constitution guarantees them equality with men in almost all walks of life. Gradually a change is coming in their position in the society. They are no longer confined to the four walls of the house. Girls can be seen freely moving on mopeds and cycles. This freedom is no longer frowned upon by elders. In the universities and colleges the number of girls is on the increase and in some classes they outnumber the boys. There is greater mixing of the sexes. All these are positive developments but they enjoy greater responsibility on the part of girls and boys regarding their conduct in relation to sex.

In the light of the changing conditions described above, it has become all the more necessary to impart some kind of sex education. Knowledge is always better than ignorance. It was thought at one time that sex education will lead to prevention of sexual misconduct. Studies in the U. S. A. show that these hopes have been belied. One reason for this may be that adolescents in western countries encounter more temptations than they do in out society. In any case sex education will definitely reduce occasions when an adolescent's ignorance is used by adults or even by his age mates for immoral purposes. Knowledge will also reduce some of the needless anxieties which bother them. About three decades back, a study was conducted by Fuster (1959) He made a survey of 319 girls between the age of 15 to 27. The majority of the girls were between 16 to 19. To the question, "Do you think that a timely sex education would have helped you ?" 75 percent said "Yes" and only nine percent said "No". One of the most suprising finding was about menarche. To the question, "Were you informed about the monthly period before your first experience ?" 131 girls or 41 percent said "No". The next question was, "What is the monthly period for ?" The answers revealed that

226 or 71 percent did not know what it was for. It is well-kniwn that the first menstruation which is called menarche, can be a terrible experience if the girl was ignorant about it and was not expecting it. She may think that some how she has injured herself.

Puster's study was done a generation back. The present day girls are expected to be more knowledgeable in this matter, but actually there are still many who suffer needless anxieties and worries due to lack of authoritative knowledge E.I. George (1969) conducted a study on 1,413 college students in the pre-degree classes. Thirty-six percent said they did not have sufficient information about sex. Schulz and Williams (1969) have published a letter from a 10th grade girl addressed to the Executive Director of the Sex Information and Education council of the U S (SIECUS), in which she complains that her mother does not tell her anything about sex, menstrual period, etc. She is unable to understand books and magazines dealing with the topic because of unfamiliar vocabulary. She writes "Would you please tell me the honest truth about sex ?..... Please, this is very important for me. I know that there are thousands of kids like me. Even in an advanced country like America such is the situation. This highlights the need for sex education. School seems to be the most appropriate agency to undertake this responsibilty.

Method of Organization and Content

'Education in Family Living', when it is organized for the first time in the school will pose some problems. The parents, due to lack of understanding may show some opposition to it. The purpose of the programme should be properly explained to them before starting it. It has been found that barring a few, the parents will be in favour of it. After it becomes a regular feature of the school, there will be no problem.

The programme should be separately organized for boys aud girls. The content should inclue three aspects of sex education :

(a) the biological aspect,

(b) the sociological aspect, and

(c) the psychological aspect

Some topics under these three aspects are given below.

The Biological Aspect : This will include physical change during puberty, secondary sex characters, menstruation, nocturnal emission, development of the fetus, endocrine glands, and veneral diseases.

The Sociological Aspect : The sociological aspect will include functions of the family, changes in the family structure, joint family and nuclear family, relationship with the siblings, relationship with the parents, marriage, legal aspects of marriage

The Psychological Aspect : This will include learning to know oneself, the id, ego and super ego, guilt feelings, moral judgment, major worries and mental conflicts.

Teacher Preparation

Not any teacher can be given the responsibility of organizing a course on sex education. It is a technical subject and the teacher should know how he should discuss the various topics in a manner suited to the maturity level of the students. If a free atmosphere is created, the children are likely to ask a number of questions. The teacher shold know what answers he is expected to give to some of the common questions. Short in- ervice programmes can be organized in which preliminary knowledge in this matter can be imparted.

Questions that Children ask

Schulz and Williams (1969) have given a list of questions that children ask. The different categories of qustions and the number of questions under each category in table 1, gives an idea about the width of children's curiosity and desire for information.

Table 1. Children's questions about sex ; Grades VII, VIII and IX.

S. No.	Category	Number of Questions	S. No.	Category	Number of Questions
1.	Dating	14	9.	Babies	2
2.	Petting	12	10.	Masturbation	4
3.	Terminology	26	11.	Seminal Emission	12
4.	Anatomy	25	12.	Sexual Intercourse	17
5.	Growth and Development	34	13.	Contraceptives	4
6.	Menstruation	28	14.	Premerital Coitus	10
7.	Personality	6	15.	Family Problems	25
8.	Reproduction	43	16.	Miscellaneous	22

Children in India may not ask questions on dating and petting, but other questions are not likely to be much different. The teacher should make some preparation as to what answer is to be given if a particular question is asked. He has to take into consideration the age of the children and has to give answers which will allay their fears and anxieties and also provide them the information that they need.

Method of Teaching

The lectures can be supplemented by films. Reading material in simple language can also be given Basic terminology list with suitable explantions can be provided Discussions should be given an important place. Schulz and Williams (1969) have given a number of topics on which discussion can be organized. Thus while teaching about family relationships the students may be asked to list areas of family conflicts. The class may be divided into small groups and one conflict situation out of those most frequently reported may be assigned to each group. The groups are to suggest how the conflicts are to be resolved Similarly, each student may be asked to list his worries. Our of these a master list may be prepared and students may be invited to suggest how these worries are to be resolved.

A question box may be introduced. Each student may be asked to write a question and put in the box. The teacher can later take up these questions for discussion in the class.

Elizabeth Force (1953) has suggested some ingenious methods on the basis of her own experience in teaching sex education to a class of girls. To give an example, one question which girls asked was, "Is a girl bad if she becomes pregant before marriage ?" Such a question should be tackled at the emotional level. A straight answer may not carry much conviction. Force told the class that she would give the answer the next day. On this day she brought a couple with a baby to the class. The girls were naturally interested in the baby. Now the teacher asked, "Here is a fine baby. What does he need in order to get a fair start in the world ?"

The students gave many answers. Then the teacher raised the question. "Is it fair to a baby not to want him ?" The discussion naturally left a more lasting impression of the mind of the adolescents than what a lecture would have done.

There are some questions which have a deeper meaning If the teacher has some understanding of what these questions stand for, she can give a suitable answer which will clarify the doubts and make the student face the realities from which she is trying

to flee. A girl asked, "It is possible to fall in love at the age of seventeen or eighteen ?" Often marriage at such a young age is an escape form an unhappy situation. Force therefore, countered the question with questions which would make the student face the reality. She asked, "Are you trying to get away from something ?" This was followed up by another question. "Is it the proper attitude for building a new home ?" She then discussed the pitfalls in early marriage especially making an immature choice.

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PSYCHOLOGY OF POPULATION ISSUES

—S. N. Tripathi

All problems which are related to human life have their psychological components. The growth in population is one such problem. There are psychological factors that are related to increase in population and an understanding of these factors will help us in formulating steps that should be taken to limit the growth of population within reasonable limits.

Lack of Personal Responsibility

Population increase has an element of lack of personal responsibility. Garrett Hardin compares increase in population with the problem of commons (Smith, 1973). He gives the example of cattle grazing. Suppose there is a common posture where herdsmen have been bringing their cattle for grazing. This has been going on for centuries. Over-grazing had been kept in check through tribal wars, poaching, and disease. A day comes when diseases are controlled and social stability is established. Each herdsman tries to add a cattle regardless of the fact that this would ultimately give rise to the disappearance of the posture. To illustrate, Hardin gives loss and gain in quantitative terms. Suppose by adding one cattle to his herd the utility to the herdsman is Ix In this, there is a negative component in terms of overgrazing Suppose the value of the negative component is-1. If this negative component had been limited to the herdsman and not shared by all herdsmen, probably he would not have gone in for an additional cattle. But the harm that the addition of one animal does to the posture is shared by all herdsmen. So the herdsmen go on adding animals because the negative effect is distributed over all herdsmen.

The same psychology works in pollution. If a factory discharges its effluents in a river, the harmful effects of polluted water are not limited to the factory owner and his employees, but all those who live in the locality and use the water of the river are affected. Hardin says, "Freedom in commons brings ruin to all."

Fortunately, in the case of population increase the parents, especially the middle class parents, have a larger share of the negative effects of increase in the number of their offspring. Though some of the burden like meeting the requirements of food, education, employment, housing, medical services, transport, etc are passed on to the nation as a whole, the family unit also has to curtail some of its needs and the limited resources have to be stretched over a larger number of individuals. Among the poorer

sections, where a child at a young age begins to contribute to the family income and where the family lacks the motivation for upward mobility, the burden of adding a child is largely passed on the nation. In these cases the psychology of the commons that Hardin talks of, is more applicable and is a causative factor for lack of motivation to limit the size of the family. If the child has to be sent to the school, the parents will be deprived of some of the earnings that the child brings. At the same time, they will have to incur some expenditure over books, stationery, etc. This will add to the sense of personal responsibility in increasing the size of the family. The dissatisfactions due to the loss of child's earnings and additional expenditure to meet the requirements of education will be mitigated to a certain extent by the sense of pride and satisfaction that the parents are likely to experience, if their children show good educational progress and attain a higher level of education than they themselves could attain. Hence a vigorous compaign to bring children to the school, apart from other benefits will also motivate the parents to limit the size of their family.

Overcrowding Affects the Psyche

With increase in population density, there is increase in crime and mental illness. In addition to these there are other effects on the behaviour of the individuals In this connection, it may be interesting to consider certain studies that have been carried out by Calhoun and his colleagues.

Calhoun's Experiment

Calhoun (1968) performed a classic experiment on rats. A small number of rats were placed in an enclosed area, given sufficient food and water and allowed to breed. The population increased rapidly, then it began to level off and finally decreased sharply. The maximum population attained was less than the space could have supported.

As the population increased there was breakdown in the social behaviour. Some male rats became aggressive giving rise to in-fighting. They attacked the pregnant females and also the nests killing the young ones. There was decline in the maternal care of the mothers. These were some of the factors that led to decline in the population In natural settings also similar findings have been reported on animals like hares, deer, chickens, and primates.

Another interesting phenomemon that was noticed was that some rats became entirely passive, avoiding all social interactions. They crowded together more than was necessary, occasionally fought, but most of the time remained sitting idly. Calhoun

calls this phenomenon "behavioral sink". Such an experiment cannot be conducted on human beings for obvious reasons. It, however, gives an indication that the population density beyond a point is likely to have an adverse effect on human beings. The problem has been examined in greater detail in another paper by Uday Jain and Girishwar Misra. ("Some Psychological Consequences of Crowding").

Population density has effect on the endocrine system. Though findings are not consistent, still there is some evidence to show that animals which have been brought up in crowded cages show increase in the weight of adrenal glands and decrease in the weight of testes and seminal vesicles.

Mental Illness, Grime and Disease

Studies on the incidence of illness and crime in cities and rural areas have been conducted. Queen has shown that institutionalized mental patients come predominatly from areas of dense population (as quoted by Freedman 1973). Schmid found a higher rate of suicide in crowded city areas (as quoted by Freedman 1973).

There is a dramatic increase in crime rate with increase in population density. The National Commission on the Causes and Prevention of Violence (USA) pointed out that violent crimes was "primarily a phenomenon of large cities" Whereas, there are 1,070 crimes per 100,000 people in rural areas, there are 2,376 in suburbs, 3430 in cities and 5.307 crimes in large cities with over a quarter million population (250,000). Twentysix cities of the U. S A. that have 17 percent of the country's population have reported 45 percent of major violent crime. Higher crime rate has been reported in the central part of the cities than the outskirts.

In India though the reported rate of crime is much less, the relationship of crime to population density holds true. With the population at 684 million in 1981, the total cognizable offences for the country as a whole were 13,45,322. The crime rate per 100,000 people was 196.7. Eight metropolitan cities—Ahmedabad, Bangalore, Bombay, Calcutta, Delhi, Hyderabad, Kanpur and Madras—that have 5.4 percent of the country's population accounted for 10 08 percent of the crime for the country as a whole. Out of the total population of 3,71,49,678 in these cities, crime committed was 1,35,631. The crime rate per one lakh people comes to be 365.1. In contrast to these densely populated cities, Lakshadweep, with a population of 40,249, reported only 12 crimes

in 1981. Projecting the population to one lakh the crime rate comes to be .03 per one lakh people

In densely populated cities, the family and neighbourhood controls become weaker, the sense of anonymity that the crowded areas lend to the individual, and the various temptations of the city life, all are conditions which in the absence of inner restraints, may lead the individual to anti-social behaviour. In slum area, due to acute poverty and unemployment, the problem is further aggrevated leading to escalation in crime.

Biological Basis

Clausen and Clausen have proposed an interesting though somewhat speculative hypothesis regarding the effect of births of children on the reproductive system of the mother (1973). They say that the first-born develops in a uterus unscared by previous births and is nurtured by a younger organism than the later born siblings The larger the number of children born, the greater is the likelihood of damage to the uterus and the reproductive system. The problem may become more acute if the children are closely spaced together.

The association of shorter stature with larger family size has been found in the Scottish Mental Survey (1953). This obtains even when the father's occupation is controlled for. One reason for this may be deterioration of mother's health with frequent child births. Another reason may be that mother being preoccupied with the youngest child, is not able to give attention to what other children are eating.

Family Size and Personal Qualities

Intelligence

There is a decline in intelligence as family size increases. Passmanick and Lilienfeld report a tenfold increase in mental deficiency as one moves from the first child to the sixth born to a mother (Clausen and Clausen, 1973).

Terman, in his study of the gifted children found that fifty percent of the gifted children were the first-born This has been supported by the study of eminent scientists by Anne Roe (1953). It seems that the first-born is in a more favourable position, both biologically and psychologically. The first-born comes in closer contect with the parents than the later born children. Adult companionship will have a more stimulating effect on the intellectual development of the child.

For intellectual development a stimulating environment is necessary. This is especially during the early years of infancy. In a large family, parents do not get sufficient time to interact with their children, to talk to them, to tell stories, to play with them and to answer their questions. Naturally, in such an environment the child faces intellectual deprivation. Families with larger number of children usually belong to lower socioeconomic status. Schooling would be poorer. This would be coupled with dietary deficiencies. It has been shown that lack of adequate protein in the diet, especially during early years of infancy, undermines the development of intelligence. In a number of studies, there is a consistent finding that as the number of children increases, there is a decline in IQ. An IQ difference of twenty-two points was found between only children and children in families with six or more offspring (Scottish Council for Research in Education, 1949). Even when the socioe status was held constant by considering only working class families, a significant drop in IQ was noticed with three or more children. Among parents with higher socioecon m status who belonged to the professional group, the drop in IQ was not marked until the family size of five or more children was attained. This means that it is not Just nourishment and physical care, which well-to-do parents can easily afford, but individual attention and interaction between parents and their children that matters and which would become less and less with five or more children. This is further supported by the finding that the deficit in intelligence with increasing size of the family is particularly marked in language skills. The first-born has superior language skills than the later-born children, because the first-born comes in greater contact with the parents and thereby has greater access to the adult speech models.

The working class parents have a larger number of children than the upper socioeconomic groups, and since their average IQ is less than that of the children from high socioeconomic groups, it was feared that the average IQ of the population as a whole will show a decline. Cattell (as cited by Mev Hunt, 1961) multiplied the number of people at each socioeconomic level by the number of children at that level, and computed the mean IQ of the next generation. He came to the startling conclusion that if this population trend continued there would be a drop of three IQ points to our generation or one point to each decade in the IQ of the population as a whole. He characterized this drop as a "galloping plungs into intellectual bankruptcy." This prediction has not been borne out by facts. Studies have shown that instead of the predicted decline, there has been a statically significant increase in IQ from one generation to another. The famous Scottish Surveys of 1932 and 1947 provide excellent data in this regard (Thomson a t a II, 1933, 1949, 1953). In Scotland, in 1932, a group intelligence test was given to nearly all eleven year old children. The magnitude of the task can be seen from the fact that the number of children tested came to be 87,498.

Fifteen years later, in 1947, a similar study was undertaken and nearly all eleven year olds were given the same group test of intelligence Their number was 70,805 To the surprise, of the investigators the 1947 group showed a mean gain of 2.28 IQ points which was statistically highly significant. Other studies have yielded similar results There can be no denying the fact that low birth rate among the higher socioeconomic groups does alter the composition of the population, but the loss in IQ, it seems, is made more than good by improvement in the intelligence level of children coming from lower socioeconomic group due to the qualitative improvement in the environment in terms of its stimulating value. With the improvement in educational facilities, publication of larger number of children's books, greater facilities for travel, and technological developments like the spread of radio and television, the eleven year olds of 1947 had a far richer background of experience than their counterparts in 1932. Since the environment is continuously being enriched, the fear, that the average level of intelligence of the population as a whole will decline, seems, for the present, to be unjustified. A saturation point in terms of improvent in environment for the lower socioeconomic groups will be reached at some stage, but by them it is hoped that they will also become aware of the advantages of having a limited family.

Achievement Motivation and Educational Attainment

Parents who have high ambitions for their children are likely to limit the size of their family. These parents would be encouraging their children to set higher goals and educational and occupational aspirations. In general, children from smaller families show higher achievement motivation and superior academic performance. Children from larger families are more deficient in educational attainment than could be predicated on the basis of their IQ.

Social Adjustment

Feelings of inferiority and day-dreaming is higher among children in families of five or more children.

In child-guidance clinics children from larger families are over-represented. This was seen in a well controlled study by Lauwe in France of 3,000 children who came to the clinic (as cited by Clausen and Clausen, 1973). There is also difference in the problems that are presented by children from large and small families. In a study in Philadelphia, children form larger families often showed less anxiety and neorosis and more school problems and anti-social behaviour.

Parents of large families are more authoritarian and restrictive in their approach to children. Since they have to look after a large family, they have limited time and

patience to explain to their children the right and wrong of a particular action. They delegate responsibility to the older child for the care of the younger. This may be a good thing for the older child but it may also entail a loss of parental contact for the younger children, who would thus be deprived of a more mature and balanced outlook of the parents. In larger families, parehts place greater value on responsibility than achievement. The children from these families tend to attain a lower occupational level than that of the father. These facts are in keeping with the lower achievement motivation which children from large families tend to have.

Serving Mothers and Number of Children

Women who work tend to limit the size of the family This probably is applicable to middle and upper class families and not to the labour class. A large number of children would come in the way of educated working woman, as she will have to work much harder to send her children to the school and herself to reach the office in time. Unlike the labour class she cannot take her infant child, whom she is nursing, to the place of work. It is also seen that when husband and wife are interested in a large number of social and cultural activities and wish to partipate in them, they tend to limit the size of their family.

Psychological Studies of Abortion

Meaning

The term abortion denotes termination of pregnancy before the fetus attains viability, i. e. becoming capable of independent life It is upto the 28th week of gestation. Abortion may be spontaneous or induced. Ten to twenty percent of the pregnancies end in spontaneous abortion. In some cases there may be psychological factors behind spontaneous abortion The woman consciously desires to have the child but in her unconscious mind she does not want the child. She is unaware of this unconscious desire against having the child, and it is the latter which creates psychosomatic conditions leading to spontaneous abortion. The reverse is also true. Here the woman consciously wants to avoid pregnancy but unconsciously she wants it. This will lead her to some action, which is not consciously determined but which just happens, and which gives rise to failure of contraceptives.

Psychological After-Effects of Abortion

Abortion plays a major role in population control. This fact is often not realised by those who condemn abortion. In a developed country like the U. S A., it is estimated

that there are about one million abortions per year There is no denying the fact that on moral grounds abortion is a questionable procedure. It is likely to give rise to guilt feelings. But bringing an unwanted child into the world has its own damaging consequences. The unwanted child may later be accepted, once the parents have reconciled themselves to the fact of pregnancy. But it is also possible that the feeling of rejection may persist. The unwanted child will then suffer ill-treatment Parental rejection is one of the foremost causes of neurosis and delinquency. At times, it gives rise to psychosomatic illness like asthama. The question, therefore, is whether to bring an unwanted child or to resort to abortion which is likely to create a feeling of guilt in the minds of the parents. The number of unplanned births is quite large. In the U. S. A. where the citizens are better educated and have greater access to contraceptives, about 50 percent of the births are unplanned, and one out of five births are unwanted Thus the number of unwanted children can be quite large. In the light of this, abortion occupies an important place in population control.

In order to understand the psychological aftereffects of abortion for the mother, it must be realised that pregnancy, especially the first, is a major biological and psychological event in the life of a woman. Fleck has observed "pregnancy involves directly the core of femininity, a woman's creativeness in the most literal sense, her sexuality, her mothering capacities and her family" (as cited by H. P. David, 1973). Without disagreeing with Fleck, it may be mentioned that psychological consequences of abortion are not very serious, though there is a difference of views on this issue among the psychologists. But well-controlled studies have demonstrated that abortion does not give rise to any serious mental illness In this section, one must take into consideration the psychological condition of the woman before abortion. If psychiatic illness is already existing, it should not be attributed as an after-effect of abortion.

In Ekbald's study of 479 Swedish women, who underwent abortion, only one percent showed psychiatric problems which impaired their working capacity, but in each of these cases some neurotic symptoms had been demonstrated before abortion (as cited by H. P. David, 1973). According to Jansson post-abortion psychosis is practically unknown (as cited by H. P. David, 1973). Post abortion depression is generally brief unless serious mental disburbances were apparent before abortion.

M. T. P. Act of India

By legalizing abortion some of the guilt feelings attached to it are likely to be reduced, both for the doctor performing the operation and the patient. During the last thirty years, there has been a gradual liberalisation of abortion laws throughout the world. In India, the Medical Termination of Pregnancy Act was passed in 1971, and came

into force form April 1, 1972. The Act allows induced abortion upto 20 weeks of pregnancy with the consent of the mother or her guardian if she is below 18 years of age. The legalisation of abortion has been accompanied, in many countries, by a sharp decline in births. The M. T. P. Act has also laid down conditions under which abortion is to be induced and these have made abortion quite safe. The death rate in India is 0.66 per 1,000 abortions done under the M. T. P. Act. If it is performed within the first trimester of gestation period by trained doctors within a hospital, the mortality rate is still less and can be treated as insignificant The mortality rate in illegal abortions is higher. In "random abortions" which include illegal abortions, the mortality rate in India is 7.8 per 1,000 abortions.

Thus, it seems that if the mother is mentally healthy, and does not have any serious psychiatric symptoms, abortion will not have any adverse psychological after effects. Medically it is a safe procedure if the conditions laid down in the M. T P. Act are observed. In the present conditions when there are a large number of unwanted pregnancies, it appears to be the only effective alternative to control the population growth.

Family Planning Surveys

A number of surveys pertainimg to knowledge, attitudes and practices, in brief KAP, have been conducted. In attitude surveys discrepancy between what the respondents say and what they actually practise has been found. Carnada and Crawford have suggested that instead of 'Yes' 'No' answers, it is better to use items in which degree of approval or disapproval is invited (1973). Items should not be so worded that they usually elicit 'Yes' responses. Kahn and Cannel have suggested a 'funnel sequence' procedure (as cited by Carnada and Crawford, 1973). It begins with open-ended questions and then proceeds to fixed alternative questions. A useful guidelince for constructing KAP survey is given in the **Manual for Surveys of Fertility and Family Planning : Knowledge, Attitude and Practice**. (The Population Council, 1970)

(For objectives and discussion see Annextwes I & II)

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Annexture I

Objectives of Teaching

1. The student will accept and exhibit a sense of personal responsibility in matters that pertain to the group as a we whole.
2. The student will be able to describe the harmful effects of overcrowding.
3. The student will be able to explain the relationship between the number of children a parent has and personal qualities that these children are likely to develop.
4. The student will be able to give justification for making abortion legal.

Points for Discussion

Content	Questions for Discussion
1. An important factor behind population growth is lack of feeling of personal responsibility.	(i) How can we develop a sense of personal responsibility in population control among the weaker sections of the population who treat children as economic assets ? (ii) If education is made compulsory what impact it is likely to have in this regard ?
2. The effects of overcrowding	(i) How many of you have experience of living in an overcrowded house ? (ii) What problems did you face ? (iii) Are there some advantages of living in a large family ? (iv) Why is crime rate likely to be higher in cities as compared to rural areas ?

Content	Question for Discussion
3. Family size and intelligence.	(v) It is seen that the lower classes have more children as compared to upper and educated classes. If this trend continues what will be its effect on the general level of the intelligence of the population as a whole ?
4. Family size and achievement motivation.	(i) Some people have high motivation to achieve great things in life while others do not have this motivation. How would you explain this in terms of experiences in the family ?
5. Family size and social adjustment.	(i) In what ways children with one or two siblings and children with a large number of siblings are likely to differ in their experiences in the home ?
	(ii) How would parents with a large number of children enforce discipline in the home ?
6. Psychological effects of abortion.	(i) Is abortion immoral ?
	(ii) Why do some women go in for abortion ?
	(iii) Often abortion is carried out by quacks or unqualified person. Why do people go to them ?

Annexture II

Objectives

1. Students will be able to describe the difference between density of population and crowding.
2. Students will be able to use the criteria for determining density of population.
3. Students will be able to describe the hazards of crowding in terms of physical and mental health.
4. Students will be able to describe the effects of crowding on the individual in terms of his social relations.
5. Students will be able to give examples of coping mechanisms that an individual adopts in order to counteract the effects of crowding.

Points for Discussion

Content	Question for Discussion
1. Feeling of crowding : primary versus secondary environment.	(i) How will you feel if you are living in a small house with large number of people ?
	(ii) Compare this feeling with the feeling you have when you visit a crowded market place. What would be the difference in your feelings ?
2. Crowding is stressful and poses hazards for mental and physical health. Feeling of stress is influenced by duration of crowding, its unexpectedness, and desire for social stimulation.	(i) What are the likely effects of stressful conditions on physical and mental health ?
	(ii) What conditions are likely to reduce this of stress ?
	(iii) What difference will it make if you are mentally prepared to live in a crowded place and when it is unexpected ?
	(iv) Suppose you have lived in a big family and then one day you find yourself all alone. How would you feel ?
3 Crowding affects complex tasks.	(i) What will be the effect of crowding on routine work and work that requires great deal of concentration of attention ?
4. Effect of crowding on social relations.	(i) What are the likely effects of crowding on our social relations ?

Content	Questions for Discussion
	(ii) What are some of the barriers to attainment of goals that arise due to crowded conditions ?
	(iii) What will be the effect of crowding on competitiveness ?
	(iv) What type of interpersonal relations develop in residential colonies located in big cities as compared to small towns ?
5. Mediating variables to crowding are : (a) tolerance (b) resources and (c) defences.	(i) In crowded localities there are individuals who are less affected by the adverse effects of crowding. What may be the characteristics of these individuals ?
	(ii) What actions can an individual initiate to reduce the effects of crowding ?

SOME PSYCHOLOGICAL CONSEQUENCES OF CROWDING

Density and the Experience of Crowding :

1. Duration of exposure.
2. Predictability.
3. Current desire for social stimulation.
4. Primary Vs. Secondary environment.

Psychological Consequences of Crowding :

1. **Hazards to mental and physical health.**
2. **Poor task performance.**
3. **Social relations—**

   (a) Goal blocking
   (b) Competition
   (c) Affective reactions
   (d) Ambiguity.

(In Indian Conditions)

Crowding and Individual's Functioning :

1. Population density
2. Feeling of crowding
3. Mediating variables—

   (a) Tolerance
   (b) Resources
   (c) Defences.

4. Consequences of Crowding.

4. 1. Personal Consequences—

   (a) Life stress
   (b) Withdrawal
   (c) Health
   (d) Perceived control.

4. 2 Inter - Personal Consequences—

   (a) Competition
   (b) Affiliation
   (c) Social support.

4. 3. Community Consequences—

   (a) Community activities.

5. Relevance to Population Education.

SOME PSYCHOLOGICAL CONSEQUENCES OF CROWDING

Uday Jain and Girishwar Misra

Growing population in the world, in general, and in the developing countries, in particular, has become an important concern of psychologists and other social scientists, including policy makers. When population grows, it grows not only in size, but also, because of depleted resources, grows in density. The density component of population growth is very important as far as its effects on behaviour are concerned.

The study of the effects of population density on behaviour was initiated in the animal laboratory where density could be manipulated under controlled conditions to observe its effects on rats. These studies consistently give evidence of negative psychological and behavioural effects of crowding (Calhoun, 1962, Christian, 1961). These findings stimulated the study of human behaviour under varying density conditions. Consequently, our understanding of the effects of high population density has increased which may help us in improving the quality of life.

Density and the Experience of Crowding

It is commonly believed that the terms density and crowding are synonymous. The density can be high as well as low. However, psychological researches have made it clear that the term density refers to the presence of many people in a smaller space, whereas crowding refers to the feeling that is aroused because of the presence of others Thus the feeling of crowding is a feeling of stress or discomfort in which people feel lack of control over environment or feel lack of privacy, or receive so many stimuli which cannot be processed at one time and, therefore, stimulus overload creates tension. In brief, the feeling of crowding is characterised by negative aspects which people generally want to avoid. The distinction of crowding and high population density also lead to the realization that high population density may not always lead to the feeling of crowding. For example one can share a smaller space with a number of friends without experiencing slightest amount of stress, whereas the same number of strangers in similar place may create the feeling of crowding. An individual may feel crowding in low density condition at one time and he may not feel crowding even in higher dendition at other time. These observations emphasize the need to investigate the specific factors associated with density and which are responsible for the feeling of crowding. It has been found, for example, that scarcity of resoures in high density is responsible for the feeling of crowding (Jain, 1984). Sundstrom (1978) has identified the following factors which determine the feeling of crowding :

1. Duration of exposure :

If one has to face high density condition for a short duration he may not feel crowding but a prolonged exposure may increase the feeling and lead to negative consequences.

2. Predictability :

Since feeling of crowding is considered as a stressful condition, therefore, unexpected exposure to high population density may create intense stress as compared to predictable high density situations to be faced by individuals.

3. Current desire for social stimulation :

It has been suggested that the feeling of crowding may depend upon the past experience and the current desire of individuals (Altman, 1975). For example, those who are living in high-density conditions from their childhood may develop a sort of adaptation and consequently may not feel crowding in contrast to those persons who are in the habit of living in low density condition.

4. Primary Versus Secondary environment :

Stokols (1975) has suggested that in primary environments such as homes, apartments, and places of work if density is high it many pose a greater threat to "psychological security" than secondary euvironment such as neighbourhood, market, etc. Jain (1984) has reported greater feeling of crowding in inside density (within home) as compared to outside density (out of home) conditions.

Thus, various types of high density do not necessarily produce aversive conditions that result in crowding. The effects are mediated by many factors. Once the crowding is experienced, it creates stress in the persons who will try to reduce stress by developing various coping strategies, and if coping strategies fail to reduce stress it will lead to negative consequences some of which are described below :

Psychological Consequences of Crowding

The experience of crowding has diverse effects on psycho-social functioning, mental health, and environmental adaptations. The restricted environment which is mainly responsible for the feeling of crowding provides stimuli as well as context which deviate

from environmental criterion for optimal functioning. A variety of researches have convincingly demonstrated that sensory deprivation as well as sensory overload interfere with cognitive, motivational and behavioural processes. In general, it has been found that the individual shows disorganisation of cognitive functions and poor adjustment with social and psychological demands. Crowding shares certain degree of commonality with the phenomenon of sensory (stimulus) overload (Milgram, 1970). The capacity of human beings to deal effectively with impinging stimuli is limited. Our sense organs can function effectively within a limited range of stimulus dimensions. High population density creates overload in two ways. On the one hand, it provides the various stimuli far above the range which human sense organs do not ordinarily receive and on the other hand it provides various stimuli simultaneously which are beyond the processing capacity. In both the situations the effects are deleterious

The adverse effects of crowding are expressed in the studies of noise pollution, air pollution and ecological imbalance. These studies demonstrate that the quality of life of individuals will deteriorate as environment creates stresses and leads to threats to survival of life. The specific effects on human functioning can be highlighted as follows :

1. Hazards to Mental and Physical Health :

The continuous exposure to crowding for relatively long period has been found to show a tendency towards poor mental and physical health. Although the results are not unequivocal, there are indications that heart diseses, ulcers, blood pressure, fatigue, psychoneurosis, and psychosis are prevalent in highly dense areas. People living in such areas also evidence restlessness, irritation anxiety and aggression It may be pointed out, however, that the constant relationship between the experience of crowding and mental and physical health problems has yet not been unambiguously established because of concomitant factors, such as paucity of resources, climatic conditions, and cultural norms The traditional Indian social network characterised by dependence, joint family, and close social relationship presents a contrast to the western society which emphasizes individualistic notion. This difference modifies the threshold of crowding for Indians.

2. Poor Task Performance :

There is considerable evidence to suggest that prior exposure to crowding and simultaneous exposure to crowding deteriorate the level and quality of performance. Experimental tasks as well as various measures of achievement have shown that the quality and level of performance deteriorate with increasing degree of density. The

observed effects are attributed to a number of individual factors and social conditions. In other words, crowding inhibits the realization of individual's potentials as well as provides a social set up which does not facilitate enactment of the acquired skills.

The effects of crowding are largely found on the complex rather than simple tasks. The reason might be that the simple takss are practised more frequently and therefore, attain certain autonomy while complex tasks demand operations of higher mental processes. Recent studies of family environment indicate that the number of siblings is negatively related to intellectual functions of children. The confluence model (Zejonc, 1976) suggests that increasing family size is associated with decreasing intelligence score and this finding is dependent of socio-economic status. The family size determine the intellectual environment which determines cognitive development and academic attainment. In a recent study, Misra and Tiwari (1985) found that the number of siblings was negatively related to performance on cognitive measures and the relationship was stronger in the urban than in the rural setting. This finding indicates that the relationship between crowding and performance is influenced by ecological variations. Studies of classroom climate also suggest that crowding interferes with classroom learning and academic achievement. The studies on quality of schooling show significant effects on the performance which show the consequences of crowding. Psychologically speaking the effect of crowding represents greater arousal and lack of concentration, persistence and resistance to distraction.

3. Social Relations :

Human beings live in groups and for pursuing different goals. Thus human association becomes a precondition for survival, growth, and development of individuals. However, the situation of crowding creates a complex setting in which associations and interactions with others produce negative effects. The experience of crowding has been found to influence social relations in a number of ways.

(a) **Goal Blocking :** The situation of crowding introduces certain elements which work as barriers in the course of goal directed activity. Individual may set new goals due to crowding. This conflicting situation taxes the capacity of the individual and limits the process of goal attainment. Crowding may interfere with the goal by way of generating threats and incompitble situations which limit or restrict goal-relevant activities. Delays, shifting of goals, and postponement of goal--activity are some of the common consequences of high population density.

(b) **Competition** : One of the inevitable consequences of high density is the sharing of resources by larger number of persons. The limits on resources, thus, imposed by high density results in competition for capturing and hoarding the resources. Such attempts result in competitive activities. It has been found by Jain (1974) that people have varying degrees of competition tolerance, which in turn, influences the feeling of crowding and mental health. People having greater capacity to tolerate competition feel less amount of stress in high density situations. Failure in managing competition may lead to frustrations, anxiety and interrupt goal directed activities.

(c) **Affective Reactions** : The experience of crowding influences the individual by initiating affective reactions which are non-conducive of positive mental health and well-being. It has been found that the feeling of crowding leads to dislike for the high densty setting and the occupants of that setting. It has been found that interpersonal attraction amongst individuals diminished with increasing density (Jain, 1981). The social tensions, juvenile delinquency, and aggression have been found more frequent in high density areas. In fact, these areas provoke undesirable behavioural manifestations by increasing the arousal level, creating conflicts, and making the home less attractive.

(d) **Ambiguity** : High density situations lack in structured, stable and meaningful relations. We often experience the impersonal, formal and individualistic pattern of living in residential colonies coming up in big cities. On the whole crowding leads to an experience of ambiguity in relation to individual and his environment.

Indian Conditions

In India as well as in other developing countries the population density is increasing. The rate of population growth and population density in India has become alarming. India has 2.4% of the world area but has more than 14% of the world's population with 2.4% of annual growth rate. The average density of population in India is estimated at 216 persons per Km2 (Census, 1981) which varies widely from one state to another. For example, the population density in Delhi is 4194 per Km2 and only 100 per Km2 in Rajasthan. Even the average density of household is 549.85 per Km2 in urban areas is quite high with a population of 684 million and poor economic and physical resources in the modern era of technological and industrial growth. Indians are living under high pressures and stresses. This fact has to be kept in mind while planning to improve the quality of life. In one of the study of Ahmedabad City (Kulkarni, 1984), it has been found that the dense population of the walled city experiences high incidence of crime. Black marketing of cinema tickets and gambling are the important types of

crime of the area. The walled city being the core of the city for commercial, administrative, religious and cultural purposes has an intensive interaction often resulting in social conflicts and tensions. These findings may be generalised to other big cities.

In view of these conditions in our country, it is highly desirable that educators should be aware and make others aware of the negative effects of crowding.

Crowding and Individual's Functioning

It can be proposed that the feeling of crowding is a psychological state contingent upon high population density, mediated by physical resources, tolerance, and defences comprising coping strategies. This implies that there is a possibility of within group differences in the feeling of crowding in a constant environment characterized by high population density. The mediating variables critically shape the quality of crowding experiences which in turn have specific consequences for the individual at three levels of functioning, i. e. personal, interpersonal, and community. The personal consequences include life stresses, anxiety, withdrawal, health and perceived control. These consequences relate the individual with his environment and has implications for individual's growth. The consequences at inter personal level are numerous. However, three major consequences can be identified namely, social support, competition and affiliation. These consequences focus on individual's relationship with other individuals. Finally, crowding has consequences at community level which are related to participation in community activities.

It may be pointed out that the consequences of crowding at the three levels of individual's functioning are not independent. Perhaps experiences at any one of the three levels may increase or decrease the magnitude of effects at other levels. Also these consequences provide feed back to the individual and contribute to the feeling of crowding. This framework does not preclude the existence of possible linkages between high population density and consequences of crowding. Under certain situations it is possible to have a direct relationship between high population density and individuals functioning at three levels. A model is graphically presented in Fig. 1

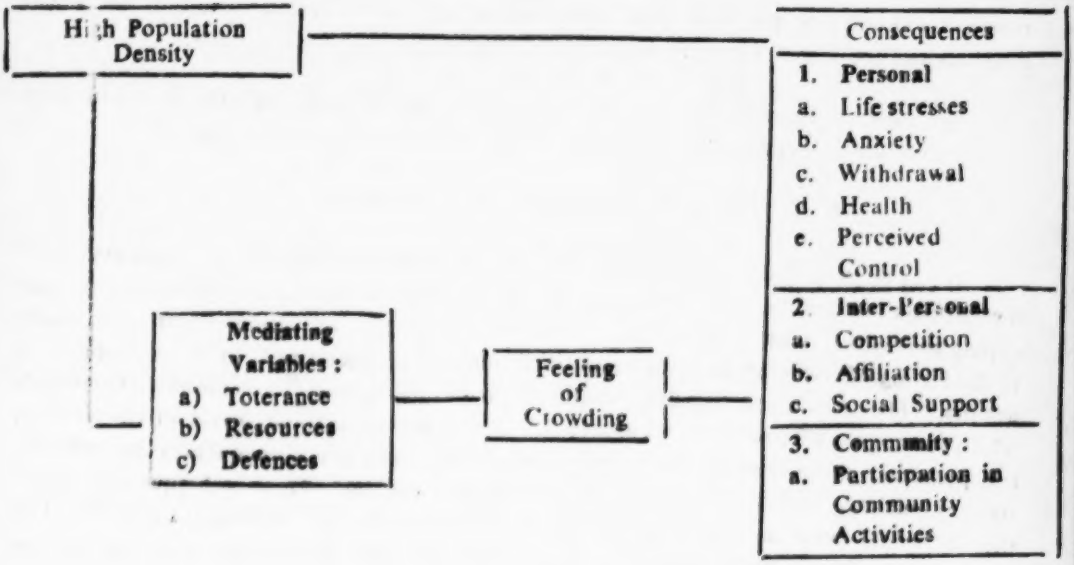

Fig. 1 : Relationship of crowding and individual's functioning.

The proposed model conceives the variables in the following manner :

1. Populatin Density :

Population density is conceived in terms of two objective indies, i. e. inside density (number of people per room, and room deficit) and a measuce of outside density (Census record). The number of rooms in the household can be regressed on the number of people in the household. Thus, the predicted number of rooms for a household of a given size and composition can be computed. The actual number of rooms in household minus the number predicted for its size and composition can be the deficit score.

2. Feeling of Crowding :

There is consensus among the researchers that crowding deals with psychological subjective state which typically has a stress component. Some researchers suggest that such feelings are associated with perception of reduced physical or psychological space (Stokols, 1976). Others emphasize the feeling of loss of control over interaction and

excess contact with others (Altman, 1975, Desor, 1972; Rappaport, 1972), or over-stimulation (Milgram, 1970). In general, all these approaches emphasize that subjective crowding is a state of stress developed due to the presence of others How many others will be tolerated may vary from individual to individual depending upon the awareness of the presence and the resultant feeling of stress. Crowding involves subjective discomfort and physiological arousal (Lazarus, 1966). The present model includes all these dimensions of the feeling of crowding.

3. **Mediating Variables :**

The proposed model contends that the subjective feeling of crowding under high density population condition is mediated by a number of variables. From the perspective of stressful transactions, the following factors are considered as critical and relevant.

(a) Tolerance

This refers to individual's capacity to accommodate high density condition. An individual may get accustomed and start liking high density conditions. Operationally it can be defined as showing liking / satisfaction with the space available in the house, satisfaction with the neighbourhood, physical facilities available, and a desire to stay in the prevailing condition.

(b) Resources

This deals with the physical resources and facilities available for the individual in the house as well as in the locality.

(c) Defences

In this context defence is considered as effort aimed at protecting one's self from the interference created by the presence of others, both at psychological as well as physical levels. For example constructing a high boundary wall around the house, a partition wall to keep others out of vision, growing trees and fencing, keeping the doors closed most of the time etc. may be considered as defences at physical level. Similarly adopting such a time table in the family so that at any given day time all the members of family do not remain in the house, arranging furniture in such a way that family members do not face each other as far as possible, etc., are examples of psychological defences.

Since high density condition is characterised as the presence of many persons in a small space, the first and foremost implication of this situation is the unwanted interac-

with others or too many interactions to attend. Therefore, the purpose of coping with this situation will be to manage their interactions in such a way so that the amount of stress is reduced.

4. Consequences of Crowding :

The present model includes the following variables as consequences of crowding at personal, interpersonal and community levels. These variables are mentioned independently. However, they are supposed to influence each other.

4.1. Personal Consequences :

(a) Life Stresses

Since crowding has been considered as stress in itself, it is reasonable to believe it will be related to other life stresses which most of the persons face in day-to-day life. Crowding is supposed to intensify these stresses.

(b) Anxiety

Crowding has been reported to lower the threshold of anxiety producing situations. Accordingly, attempt can be made to examine the levels of anxiety as conceived by Mehrabian and Russel (1974). They have proposed that state of anxiety involves low pleasure and low dominance with high arousal. Thus state of anxiety is a feeling of having little pleasure rather displeasure and of limited freedom of choice with feeling excitement (too many stimuli to be attended or stimulus anxiety) These three components are independent in themselves but in their relationship their joint effect can be considered as state of anxiety.

(c) Withdrawal

Crowding may produce a tendency to withdraw from this unpleasant situation. This is manifested in planning to leave the crowded situation and to move out from high density living area. In the present context, the planning to leave the residence, expressed pleasure over the opportunity to change the residence or town for a more spacious accommodation, the efforts on the part of individual to stay in the house/locility for shortest period etc., are viewed as objective indicators of withdrawal.

(d) Health

The relationship of crowding with states of mental and physical well-being / ill health has been established in several studies. However, the findings have not always been consistent (eg. Freedman, 1975). The differences may be partly attributable to the differences in the measures e. g. blood pressure, medical history, and measures of mental and physical health.

(e) **Perceived Control**

In high density environments a loss of control over social interactions as well as outcomes is generally experienced. This loss of control is mainly because of reduced choices and lack of correspondence in effort to reduce the feelings of crowding and success in achieving that situation.

4.2. Interpersonal Consequences :

(a) **Competition :**

High papulation density creates competition for the utilization of available resources (including the special facilities) Competition involves a desire for acting alone to enjoy some facilities in or outside the home with a feeling that some other person may get the same if he misses the chance.

(b) **Affiliation :**

A number of studies have documented that need for affiliation is related to the experience of crowding. In the present model, affiliation is viewed in terms of those social activities in which we participate i. e. membership of various associations etc.

(c) **Social Support :**

Prolonged living in high density areas or houses may lead to adaptation to those situations. Those who develop adaptation might perceive the situation more positively. This positive perception may include the feeling of high social support from neighbourhood In the course of stay in high-density areas people may develop affinity with their neighbours and experience feeling of happiness amongst those neighbours, while leaving them may be perceived as painful.

4.3. Community Consequences :

(a) **Community Activities**

These activities can be characterised as activities jointly undertaken by the community members. Neighbourhood, caste, or regional groups can be taken which are near the locality as indications of the efforts of crowding.

Relevance to Population Education

The knowledge of crowding and its consequences for human behaviour is relevant to teacher educators in facilitating their role in developing human resources, maintaining and enhancing the positive features of environment, and contributing to the quality of life. These aspects have largely been neglected for a long time because of lack of awareness as well as due to the implicit notion that people develop the desired environmental attitude with growing age, and it does not require any special instruction. However, the experience in the last few decades has shown that such an assumption is false. We have been noticing remarkable decline in the standards of life and rapid increases in the magnitude of environmental pollution. These trends are generally assuming alarming proportions and urgent measures are necessary for insuring provision for a livable environment. The task, therefore, which teacher educators and teachers have to face is to impress upon and develop the healthy and balanced attitude towards the individual-environment relationship. So far, the model of development considered environment as a resource to be exploited and man was central to all developmental endeavours. This led to an attitude that environment is for the individuals. This lopsided assumption has superficially contribued to temporary advancements. The hidden costs of such efforts are now becoming apparent. Development is not a unitary concept. It has several facets and we have to choose the model of development which suits our culture, ethos, and environment.

Against this background there is a need to redefind the concept, mode and ways of development. Development involves individual and context (environment) with equal emphasis on both. Exclusion of any one of these is bound to create distortions. The teacher educator has a responsibility to create the right kind of attitudes and behaviours which can promote the desired goals of development. Specially, the tasks, thus envisaged are as follows :

1. To create awareness about the damaging effects of crowding on different aspects of human behaviour.

2. To develop awareness about the proper use of space which will have optimum density in planning of residential colonies

3. To provide experiences which can help in learning that crowding is controllable.

4. To plan learning environments which would not have the disadvantage of crowding.

5. To act as an agent of social change by providing behavioural models and relevant feed--back.

Annexture III

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ANNEXTURE III :

Consequences of Crowding For Teacher Educators —

Objectives :

1. To help the teacher understand what crowding is.
2. To assist them understand the causes of crowding - viz. increase in population, urbanisation, migration etc.
3. To assist them understand the difference between density and crowding.
4. To help them understand the effects of crowding on health, mental functioning and efficiency.
5. To assist them understand the behaviour in high density locality.

UNIT No. CONTENTS	METHODS	AIDS
1. Crowding :- **A. Introduction** **B. What is Crowding** **C. Density and Crowding** **D. Conditions of Crowding** **i) Duration** **ii) Predictability** **iii) Desire for social stimulation** **iv) Primary Vs. Secondary Environment**	**Lecture and discussion method. When a person will feel Crowding ?** **What is meant by desire for social stimulation ?**	**Chart showing kinds of pollution.**
2. Consequences of Crowding :- **1. Types of overloading caused by high population density.** **2. Hazards to mental and physical health.** **3. Poor task performance.** **4. Social Relations--** **i) Goal blocking** **ii) Competiton** **iii) Affective Reactions** **iv) Ambiguity.**	**Lecture and discussion method When toleranc will not have negative results.**	
3. Indian Conditions :-- **i) Density of population per Km.^{2}** **ii) Towards a better understanding of crowding.**		

4. **Variables of Crowding :--**
   - i) Population Density
   - ii) Feeling of Crowding
   - iii) Tolerance
   - iv) Resources
   - v) Defence.

figure showing relationship of crowding & individual's functioning.

5. **Negative Consequences of Crowding :--**

   A. Personal Consequences-
   - i) Life stress
   - ii) Anxiety
   - iii) Withdrawal
   - iv) Health
   - v) Perceived Control.

How will you classify Personal & Interpersonal relations ?

   B. Inter Personal--Consequences
   - i) Competition
   - ii) Affiliation
   - iii) Social Support

--do--

   C Community Consequences-- Community activities.

--do--

6. **Relevance to Population Education --**
   1. Knowledge of Crowding for Teacher Educator.
   2. Task of the teacher.